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**MUNICIPAL SEPARATE STORM
SEWER SYSTEM (MS4)
COMPLIANCE INSPECTION**

WASHINGTON STATE DEPARTMENT OF TRANSPORTATION

**FINAL
INSPECTION REPORT**

**Inspection Dates:
January 31–February 1, 2012**

**Report Date:
May 7, 2012**

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Section 1.0 Introduction

On January 31–February 1, 2012, the U.S. Environmental Protection Agency (EPA), Region 10, and an EPA contractor, PG Environmental, LLC (hereinafter, collectively, the EPA Inspection Team) conducted an inspection of the Municipal Separate Storm Sewer System (MS4) Program of the Washington Department of Transportation (WSDOT). Discharges from the WSDOT MS4 are regulated under the *Washington State Department of Transportation National Pollutant Discharge and Elimination System (NDPES) and State Waste Discharge Permit for Municipal Stormwater*, Permit No. WAR043000A (hereinafter, the Permit; see [Appendix A](#)), issued by the State of Washington Department of Ecology (Ecology) and effective March 6, 2009. The Permit is WSDOT’s first individual municipal stormwater permit, and it is set to expire on March 6, 2014. WSDOT initially received coverage under NPDES municipal stormwater permits issued by Ecology in 1995 and has been developing its MS4 program since that time.

The Permit authorizes WSDOT (the Permittee) to discharge stormwater and certain non-stormwater flows to surface waters and to groundwaters of the state from the MS4 owned or operated by WSDOT in the permitted area (defined as areas covered by the Phase I Municipal Stormwater Permit, the Eastern Washington Phase II Municipal Stormwater Permit, and the Western Washington Phase II Municipal Stormwater Permit), under the Permit terms and conditions. The Permit covers stormwater discharges associated with WSDOT’s highways, maintenance facilities, ferry terminals, rest areas, and park and ride lots when the discharges are conveyed through an MS4 owned or operated by WSDOT. WSDOT manages 1,600 centerline miles of state highways, 11 ferry terminals, 12 park and ride lots, six safety rest areas, and 32 maintenance facilities within the permitted area.

Part S5.A.1 of the Permit requires WSDOT to “implement and enforce its [Washington State Department of Ecology] Ecology approved Stormwater Management Program,” which is incorporated as Appendix 7 of the Permit. The WSDOT MS4 Permit Coordinator confirmed that WSDOT is currently operating under the WSDOT Stormwater Management Program Plan included in the Permit (hereinafter, WSDOT SWMPP).

With respect to the Permit, the WSDOT organization consists of the Headquarters Offices, six Regional Offices, an Urban Corridors Office (UCO), and the Washington State Ferries Division (WSF). Although each of these organizational divisions is assigned responsibilities associated with the stormwater management program (SWMP), the Environmental Services Office’s (ESO) Water Quality Program has overall responsibility for managing the SWMP. ESO staff, as part of the Headquarters Offices, consult with WSDOT’s Stormwater Policy Committee and are collectively responsible for initiating implementation of the SWMP by guiding policy development. Although the Headquarters Offices conduct multiple types of SWMP field oversight, the Regional Offices and the WSF are generally responsible for carrying out SWMP activities in the field. Overall, the WSF is responsible for stormwater-related activities at ferry terminals and Regional Offices are responsible for stormwater-related construction and maintenance for other highway-related facilities covered under the Permit.

The EPA MS4 program compliance inspection evaluated facilities and projects in the Olympic and Northwest Regions, as well as the Headquarters Offices' overall statewide program management. The MS4 program compliance inspection primarily included these Regional Offices and the Headquarters Offices within its scope.

The inspection focused on four Programs described in Appendix 7, Sections 2, 3, 4, and 7, of the Permit as follows:

- Stormwater Facilities Inventory and Documentation
- Illicit Discharge Detection and Elimination (IDDE)
- Construction Stormwater Pollution Prevention
- Maintenance.

The purpose of the inspection was to obtain information that will assist EPA in assessing WSDOT's compliance with the requirements of the Permit and associated WSDOT SWMPP, as well as the implementation status of the current MS4 Program. The inspection schedule is presented as Appendix B.

The EPA Inspection Team obtained information through a series of interviews with representatives from WSDOT Headquarters and ESO, staff from the Olympic and Northwest Regional Offices, and various contractors, along with a series of site visits, record reviews, and field verification activities within the respective regions. The WSDOT Headquarters session was held to obtain information regarding overall program management, program evaluation, and oversight. In addition, the EPA Inspection Team held a closing conference at WSDOT Headquarters on February 1, 2012, with representatives from the respective organizational divisions. Light, intermittent rainfall was experienced during the inspection field activities.

The primary representatives involved in the inspection were the following:

Washington State Department of Transportation MS4 Program Compliance Inspection: January 31–February 1, 2012	
WSDOT ESO Representatives:	Larry Schaffner, MS4 Permit Coordinator Elsa Piekarski, Statewide Erosion Control Lead Tim Hall, Features Inventory Lead / Data Steward Chris Gustafson, IDDE Support Cory Simon, Features Inventory Coordinator Dick Gersib, Stormwater and Watersheds Program Manager Megan White, ESO Director

Washington State Department of Transportation MS4 Program Compliance Inspection: January 31–February 1, 2012	
WSDOT Maintenance Representatives:	Rico Baroga, Maintenance Policy Manager Norm Payton, Stormwater and Environmental Policy Manager Trett Sutter, Stormwater Specialist
WSDOT Construction Representatives:	Jeff Carpenter, Construction Division Director Dave Erickson, State Roadway Construction Engineer
WSDOT Design Representative:	Mark Maurer, Assistant State Hydraulics Engineer Stormwater
WSDOT Utilities Representative:	Chris Ehresmann, Olympic Region IDDE Contact
WSDOT Incident Response (IR) Team Representatives:	Michael Evanso, IRT Supervisor Vince Fairhurst, State IR Manager
WSDOT – Washington State Ferries Division (WSF) Representative:	Sheila Helgath, WSF Environmental Program Manager
Washington State Department of Ecology Representatives:	Bill Moore, NPDES Section Manager, Water Quality Kathleen Emmett, Municipal Unit Supervisor, Water Quality Foroozan Labib, WSDOT MS4 Permit Manager, Water Quality Vince McGowan, MS4 Permit Manager, Water Quality Anne Dettelbach, MS4 Permit Manager, Water Quality
EPA Representatives:	Julie Congdon, EPA Region 10, MS4 Inspection and Enforcement Coordinator Dustan Bott, EPA Region 10, MS4 Inspector
EPA Contractors:	Scott Coulson, PG Environmental, LLC Marleina Overton, PG Environmental, LLC

Section 2.0 Information Obtained Regarding Compliance with the Permit

The EPA Inspection Team conducted an evaluation of the WSDOT MS4 Program to obtain information that will assist EPA in assessing WSDOT's compliance with the requirements of the Permit.

Prior to the inspection, the EPA Inspection Team formally requested that WSDOT provide specific documentation for review by the Team and have specific documentation available for review at the time of the inspection. The EPA Inspection Team provided WSDOT with a written list of requested records on December 16, 2011 (hereinafter, EPA Records Request; see [Appendix C, Exhibit 1](#)). In response, on January 17, 2012, WSDOT provided the EPA Inspection Team with an electronic spreadsheet containing embedded documents requested by the EPA Inspection Team (hereinafter, WSDOT Part 1 Submittal). In addition, on January 30, 2012 (hereinafter, WSDOT Part 2 Submittal) and February 16, 2012 (hereinafter, WSDOT Part 3 Submittal), the EPA Inspection Team received submittals and electronic spreadsheets from WSDOT that contained information pertinent to the EPA Records Request. The WSDOT Parts 1–3 Submittals are hereinafter referred to as the WSDOT Response Inventory, and they are presented together as [Appendix C, Exhibit 2](#). In addition, WSDOT made multiple documents available during the inspection. The EPA Records Request and WSDOT Response Inventory are referenced, as applicable, throughout this inspection report.

During the inspection, the EPA Inspection Team obtained documentation and other supporting evidence regarding compliance with the Permit and implementation of the WSDOT SWMPP. Pertinent information obtained during the evaluation is presented in this inspection report as inspection observations. The presentation of inspection observations in this report does not constitute a formal compliance determination or notice of violation; rather, it identifies potential permit non-compliance and program deficiencies. Program deficiencies are areas of concern for successful program implementation. All referenced documentation used as supporting evidence is provided in [Appendix C](#), the Exhibit Log; photo documentation is provided in [Appendix D](#), the Photograph Log.

Table 1 provides a summary of the EPA Inspection Team's overall inspection observations. Descriptions and details regarding the inspection observations, as well as supporting documentation, are provided in the applicable sections of this MS4 inspection report.

During the inspection, the EPA Inspection Team identified several elements of the WSDOT MS4 Program that were notable, including the following:

1. The WSDOT MS4 Permit Coordinator explained that the WSDOT SWMPP was originally developed with stakeholder input and suggestions from the various WSDOT regions, sections, and divisions rather than being handed down from

Headquarters under a top-down approach. The EPA Inspection Team noted that this process had likely resulted in a greater sense of ownership by staff that are tasked with implementation at the regional and other levels. This does not in any way suggest that WSDOT should self-develop future versions of the SWMPP without significant participation and direction by Ecology.

2. The WSDOT MS4 Permit Coordinator explained that he had developed a Permit implementation tracking spreadsheet to help sequence tasks and meet the required compliance dates (see Appendix C, Exhibit 3). He explained that this has also been a powerful tool to translate the complicated technical and legal Permit language into something that WSDOT management and state appropriations staff can readily understand.
3. WSDOT has an active Stormwater Policy Committee, which is chaired by the ESO Resources Programs Branch Manager. Its members include representatives from the WSDOT Regional Offices, UCO, WSF, and Headquarters Offices. The Stormwater Policy Committee meets quarterly, and its duties and responsibilities include assisting with stormwater management policy issues, providing recommendations to management on approaches to meet regulatory obligations, and providing guidance for developing the stormwater work plan and SWMP.
4. For its storm drain system inspection and maintenance program, WSDOT plans to add inspection questions (see Appendix C, Exhibit 4) to its Highway Activity Tracking System (HATS), a computerized maintenance management system. This is intended to prompt WSDOT maintenance staff to enter into HATS the information needed to ensure that the maintenance criteria specified in the *Highway Runoff Manual* are being met.

Table 1. Requirements of the WSDOT NPDES Permit (WAR043000A) and Potential Non-compliance/Program Deficiencies Identified by the EPA Inspection Team

Program Elements and Permit Requirements	Potential Non-compliance
<p>Stormwater Facilities Inventory and Documentation</p> <p>Section 2.5 of the WSDOT SWMPP requires that "No later than five years from the effective date of this Permit [March 5, 2014], WSDOT will map all known municipal separate storm sewer outfalls and structural stormwater treatment and flow control BMPs it owns, operates, or maintains."</p> <p>See Section 2.1.1 of the inspection report for the specific SWMPP references for each item of potential non-compliance.</p>	<ol style="list-style-type: none"> 1. WSDOT needs to ensure that it is on schedule to map all known municipal separate storm sewer outfalls and structural stormwater treatment and flow control BMPs by the end of the Permit term (Section 2.1.1). <p>See the referenced section of the inspection report for further discussion of this issue.</p>
<p>Illicit Discharge Detection and Elimination (IDDE)</p> <p>Section 3 of the WSDOT SWMPP states, "WSDOT's IDDE program is designed to identify and eliminate illicit discharges and illegal connections to WSDOT's MS4."</p> <p>See Sections 2.2.1 and 2.2.2 of the inspection report for the specific SWMPP references for each item of potential non-compliance.</p>	<ol style="list-style-type: none"> 1. WSDOT could improve its program by implementing procedures to ensure that all illicit connections/ illicit discharges (IC/IDs) are included in the <i>IDDE Report</i> spreadsheet and that IC/IDs are tracked from identification through resolution (Section 2.2.1). 2. WSDOT did not provide adequate records to demonstrate that appropriate staff had been trained on the identification of IC/IDs, or on procedures for reporting and responding to IC/IDs (Section 2.2.2). <p>See the referenced sections of the inspection report for further discussion of these issues.</p>
<p>Construction Stormwater Pollution Prevention</p> <p>Section 4 of the WSDOT SWMPP outlines general requirements for WSDOT and its contractors to prevent stormwater pollution on WSDOT construction projects.</p> <p>See Section 2.3.1 of the inspection report for the specific SWMPP references for the item of potential non-compliance.</p>	<ol style="list-style-type: none"> 1. WSDOT could improve its Fall Temporary Erosion and Sediment Control (TESC) Effectiveness Assessments (Section 2.3.1). <p>See the referenced section of the inspection report for further discussion of this issue.</p>
<p>Maintenance</p> <p>Section 7 of the WSDOT SWMPP includes requirements to develop annual inspection programs for permanent stormwater BMPs and to develop and implement stormwater pollution prevention plans (SWPPPs) at WSDOT maintenance facilities.</p> <p>See Section 2.4.1 and 2.4.2 of the inspection report for the specific SWMPP references for each item of potential non-compliance.</p>	<ol style="list-style-type: none"> 1. WSDOT needs to ensure that it is on schedule to annually inspect permanent stormwater BMPs by the specified compliance date (Section 2.4.1). 2. Concerns pertaining to improper pollution prevention and housekeeping practices were noted during site visits at WSDOT Maintenance facilities and material storage sites conducted as a component of the inspection (Section 2.4.2). <p>See the referenced section of the inspection report for further discussion of these issues.</p>

Section 2.1 Stormwater Facilities Inventory and Documentation

Section 2.5 of the WSDOT SWMPP outlines WSDOT's requirements for mapping the municipal separate storm sewer outfalls, structural stormwater treatment and flow control best management practices (BMPs), and connection points between municipal separate storm sewers owned or operated by WSDOT and other municipalities or other public entities.

2.1.1. WSDOT needs to ensure that it is on schedule to map all known municipal separate storm sewer outfalls and structural stormwater treatment and flow control BMPs by the end of the Permit term.

Section 2.5 of the WSDOT SWMPP requires that "No later than five years from the effective date of this Permit [March 5, 2014], WSDOT will map all known municipal separate storm sewer outfalls and structural stormwater treatment and flow control BMPs it owns, operates, or maintains."

The WSDOT Features Inventory Coordinator explained that WSDOT is using its Roadside Features Inventory Program and discharge inventory in its mapping effort. He stated that currently WSDOT has mapped approximately 11 percent of the 1600 total centerline miles within the permitted area. Another 800 centerline miles have been inventoried as part of prior efforts for different purposes, and WSDOT is assessing the quality of the data and whether it can be incorporated, needs field verification, or provides no value.

The WSDOT Features Inventory Coordinator described a plan to complete the mapping prior to the compliance date. Specifically, he went on to explain that an internship program had been developed for digitizing discharge points and a field team had been assembled in October 2011 to expand the mapping and inventory efforts. While the mapping and inventory would be performed by WSDOT crews, a consultant would be contracted prior to the compliance date to ensure conditions of the Permit are met.

The EPA Inspection Team views the MS4 map as a critical base-level tool with broad value across all program areas and stresses that WSDOT needs to ensure that it is on schedule to map all known municipal separate storm sewer outfalls and structural stormwater treatment and flow control BMPs by the end of the Permit term.

Section 2.2 Illicit Discharge Detection and Elimination (IDDE)

Section 3 of the WSDOT SWMPP states, “WSDOT’s IDDE program is designed to identify and eliminate illicit discharges and illegal connections to WSDOT’s MS4.” The IDDE component of the WSDOT SWMPP provides the basis for WSDOT’s IDDE program and identifies activities to be conducted by WSDOT staff.

2.2.1. WSDOT could improve its program by implementing procedures to ensure that all illicit connections/ illicit discharges (IC/IDs) are included in the *IDDE Report* spreadsheet and that IC/IDs are tracked from identification through resolution.

Section 3.2 of the WSDOT SWMPP discusses illicit connection and discharge (IC/ID) notification procedures and states that “a record will be completed for all discovered IDDEs.” Pursuant to this requirement, the EPA Inspection Team requested an “inventory of reported incidents of illicit discharges/connections/spills and resolution (most recent Reporting Year).” WSDOT provided records spanning from January 2011 to December 2011 in a spreadsheet entitled *IDDE Report*, rev. January 25, 2011 (see Appendix C, Exhibit 5). Additionally, during the inspection WSDOT provided a guide entitled *2011 Illicit Discharge Detection and Elimination (IDDE) Web Application*, which was developed for WSDOT staff and details procedures for how to use the IDDE application/database for tracking and resolution (see Appendix C, Exhibit 6).

WSDOT Incident Response and ESO personnel explained that a system is in place to track and address spills to the extent that hot spots have been identified for safety purposes and measures are taken to prevent recurring issues. However, this program has not been fully integrated into WSDOT’s IDDE program. For example, the *IDDE Report* spreadsheet does not include entries pertaining to roadway spills, which suggests the need for improved communication between designated WSDOT Regional IDDE contacts and Incident Response personnel regarding IC/ID response and resolution. Furthermore, the IDDE Web Application does not appear to include a means to report illicit discharges related to roadway spills.

The WSDOT Stormwater Features Inventory Coordinator explained that the WSDOT Regional IDDE contacts are not routinely notified by Incident Response personnel on the occurrence of roadway spills. He added that ESO staff were working with state radio command to ensure that WSDOT Regional IDDE contacts are notified and applicable incidents can be centrally tracked. The EPA Inspection Team stresses that effective communication is vital in demonstrating that resolution was obtained when multiple WSDOT personnel, organizational divisions, or outside agencies are involved.

On January 31, 2012, the EPA Inspection Team conducted a site visit with WSDOT staff to an area along State Route (SR) 510 near the intersection of Chatham Drive, where WSDOT staff had previously identified direct and indirect connections to WSDOT’s MS4 and right-of-way. The illicit connections were originating from a residential neighborhood, through several corrugated plastic pipes, and along a slope lined with riprap that functioned as an emergency overflow for a pond within the neighborhood (see Appendix D, Photographs 1 through 5). WSDOT staff explained to the EPA Inspection

Team that global positioning system (GPS) points had been collected for the illicit connections in October 2011, but resolution had not yet been achieved at the time of the EPA Inspection Team's site visit. A review of the *IDDE Report* provided by WSDOT (see [Appendix C, Exhibit 5](#)), gave no indication that the SR 510 illicit connections had been included in the IDDE inventory.

Appendix 2 of the Permit specifies a Performance Indicator for the IDDE Program requiring WSDOT to "[a]nnually summarize and report on tracking/remediation activities for illicit discharges and illegal connections." In contrast to this requirement, a number of the entries in the *IDDE Report* were not listed in Appendix 2, Table 12, *Summary of IDDE Issues and Remediation Activities* of the 2011 Stormwater Report (a.k.a. the WSDOT MS4 Annual Report, see [Appendix C, Exhibit 7](#)). For example, IDDE Record No. NW_SR525_MP1.82_16Mar2011 in the *IDDE Report* is not included in Table 12. It should be noted that the reporting period for the 2011 Stormwater Report ended June 30, 2011, and entries in the *IDDE Report* ranged from January 25, 2011, to December 21, 2011. Therefore, this observation on annual reporting discrepancies relates to only the entries not included in the 2011 Stormwater Report within the above-referenced reporting period.

Based on a review of the *IDDE Report* spreadsheet (i.e., WSDOT IC/ID tracking records), the EPA Inspection Team also determined that the tracking records do not always show timely response and resolution of IC/ID incidents. For example, an entry denoted ID Record No. NW_SR099_MP6.05_10Feb2011 in the *IDDE Report* spreadsheet does not demonstrate that resolution was obtained (see [Appendix C, Exhibit 5](#)).

Based on these observations, WSDOT had not conducted a thorough data collection effort with regard to the occurrence of all IC/IDs into roads with drainage systems and other components of the MS4, including the inclusion of spill incidents and their resolution in the *IDDE Report* spreadsheet. In addition, discrepancies were identified between the *IDDE Report* and the 2011 Stormwater Report, indicating a lack of consistency in documenting instances of IC/IDs. It also was apparent that there was a delay in entering IC/IDs into the *IDDE Report* spreadsheet.

It should be noted that the Permit does not specifically require WSDOT to implement a procedure to track all reports of IC/IDs and the action taken on them.

2.2.2. WSDOT did not provide adequate records to demonstrate that appropriate staff had been trained on the identification of IC/IDs, or on procedures for reporting and responding to IC/IDs.

Section 3.1 of the WSDOT SWMPP states that "[i]llicit discharge detection and elimination programs for state transportation departments are substantially different than those for municipalities.... While public reporting plays a role, the identification of illicit discharges and illegal connections relies primarily on field observations reported from

maintenance, construction, and design staff as well as crews inventorying and documenting stormwater management facilities and connection points.” Because WSDOT intends to leverage field staff having direct contact with the MS4 (e.g., road and BMP maintenance crews) to actively detect and eliminate illegal dumping/discharges, training of those staff is critically important.

Section 3.4 of the WSDOT SWMPP indicates that Endangered Species Act-related training includes identification of and procedures for reporting illicit discharges (including spills), and stormwater pollution prevention plan (SWPPP)-related training includes identification of and procedures for reporting, and methods for cleaning up and eliminating, illicit discharges (including spills).

Pursuant to this requirement, the EPA Inspection Team requested “[e]mployee/maintenance personnel training records and syllabus pertaining to IDDE (most recent Reporting Year).” In response, WSDOT provided a spreadsheet entitled *IDDE/Spill Training for WSDOT*, January 24, 2011, which is intended to serve as training records for WSDOT staff (see Appendix C, Exhibit 8). WSDOT also provided a file outlining IDDE training and information for Regional IDDE contacts and field staff entitled *IDDE Training – Field Staff*, rev. January 27, 2012 (see Appendix C, Exhibit 9). Lastly, WSDOT provided a training aid entitled *IDDE Presentation*, rev. August 24, 2011, which included definitions, photographs, and examples of IC/IDs (see Appendix C, Exhibit 10).

The EPA Inspection Team reviewed the WSDOT training records and determined that the records did not document which WSDOT staff had attended the training and on what dates IDDE training had occurred. The *IDDE/Spill Training for WSDOT* spreadsheet included multiple worksheets, none of which clearly documented that IDDE training had been conducted or the names of WSDOT staff in attendance. In addition, several worksheets listed only the number of attendees and did not indicate the date training was conducted, the name of the person who conducted the training, the location of the training session, or the WSDOT Region where training was held.

Although the *IDDE Presentation* provided by WSDOT to the EPA Inspection Team includes a comprehensive overview of IC/IDs, the following could not be determined: (1) whether the presentation was provided as part of another training program (i.e., Maintenance, Erosion, ESO, Endangered Species Act) or was standalone IDDE-specific training, (2) when the presentation was provided to WSDOT staff, and (3) which staff had received training that included the *IDDE Presentation*.

The WSDOT Stormwater and Environmental Policy Manager, who is a member of Headquarters Maintenance, explained that maintenance facility SWPPP training, a separate training session, did not instruct staff on who to contact in the event of an IC/ID incident. He added that now that WSDOT Regional IDDE contacts have been assigned, refresher training is needed to provide Maintenance staff with the proper contact information. *IDDE Training – Field Staff*, rev. January 27, 2012, provides an outline/syllabus for training and includes information for Regional IDDE contacts (see

Appendix C, Exhibit 9), but the updated training had not yet been provided to Maintenance field staff.

In summary, the training documents provided by WSDOT to the EPA Inspection Team did not demonstrate that appropriate staff had been trained on procedures for identifying and eliminating IC/IDs. It should be noted that it is possible that WSDOT's Automated Training System has more information on training attendance than the training records provided to the EPA Inspection Team.

To improve the overall program and ensure compliance with Section 3.4 of the WSDOT SWMPP, the EPA Inspection Team recommends that WSDOT identify staff that are most likely to encounter IC/IDs during regular work activities, targeting those staff for IDDE-specific training and documenting any training that is IDDE-specific or includes discussions of IDDE procedures. Specifically, the training program should include established schedules and frequencies for training activities, identification of staff or positions that require training, procedures for documenting and tracking training activities, and effectiveness measures for assessing the implementation of the training program.

Because WSDOT intends to leverage field staff having direct contact with the MS4 (e.g., road and BMP maintenance crews) to actively detect and eliminate illegal dumping/discharges, the EPA Inspection Team also recommends that WSDOT track notifications by field staff as a measure of the effectiveness of its training program. The training program could then be modified based on the data collected (e.g., which divisions need refresher training, which divisions are actively engaged).

Section 2.3 Construction Stormwater Pollution Prevention

The main oversight component of WSDOT's Construction Stormwater Pollution Prevention Program included in Section 4 of the WSDOT SWMPP is the Fall Temporary Erosion and Sediment Control (TESC) Effectiveness Assessments. Section 4 of the WSDOT SWMPP outlines general requirements for WSDOT and its contractors to prevent stormwater pollution on WSDOT construction projects and identifies performance measures evaluated by the WSDOT Statewide Erosion Control Lead during the Fall TESC Effectiveness Assessments.

On January 31, 2012, and February 1, 2012, the EPA Inspection Team discussed the Fall TESC Effectiveness Assessments with the WSDOT Statewide Erosion Control Lead to determine WSDOT's responsibilities and oversight on WSDOT construction sites and conducted site visits at three construction sites. The primary purpose of the site visits was to observe the WSDOT Statewide Erosion Control Lead's process for conducting Fall TESC Effectiveness Assessments; therefore, a discussion of site concerns observed during the site visits has not been included in this report.

2.3.1. WSDOT could improve its Fall TESC Effectiveness Assessments.

Section 4.1 of the WSDOT SWMPP states: "The primary focus of construction stormwater planning is to prevent sediment and other pollutants associated with construction activity from impacting soil, air, and water quality to comply with NPDES Construction Stormwater Permit requirements." Pursuant to this requirement, the EPA Inspection Team requested "[c]onstruction inspection records for the Fall Effectiveness Assessment (most recent Reporting Year)." In response to this request, WSDOT provided Annual Fall TESC Assessment Reports completed in fall 2010 (for example, see Appendix C, Exhibit 11).

The WSDOT Statewide Erosion Control Lead indicated that the WSDOT Project Engineer and Project Inspector are the WSDOT Construction representatives charged with administering enforcement of construction contract stipulations. The WSDOT Statewide Erosion Control Lead added that she typically addresses any site deficiencies in coordination with the project's Chief Project Inspector, who is in direct contact with the day-to-day operations of the assigned construction project. Importantly, the WSDOT Statewide Erosion Control Lead is not granted the authority to require corrective actions; therefore, the results of the Fall TESC Effectiveness Assessments are transmitted to the WSDOT Project Engineer as recommendations in the Summary and Line Item sections of the report (see Appendix C, Exhibit 11).

The EPA Inspection Team recommends that a written procedure be developed to provide clear guidelines and time frames for requiring corrective actions from contractors as a component of the Fall TESC Effectiveness Assessments. Specifically, the procedure should articulate a process for the WSDOT Statewide Erosion Control Lead to initiate and coordinate corrective actions through WSDOT Construction staff.

For the WSDOT Statewide Erosion Control Lead to build rapport with WSDOT Construction staff, the EPA Inspection Team also recommends that the Statewide Erosion Control Lead attend pre-construction and regular project meetings for moderate- and high-risk projects. Such project meetings might provide a forum to increase communication, create a strong field presence, and build the project-specific knowledge needed for conducting the Fall TESC Effectiveness Assessments.

Section 2.4 Maintenance

Section 7 of the WSDOT SWMPP includes requirements to develop annual inspection programs for permanent stormwater BMPs and to develop and implement SWPPPs at WSDOT maintenance facilities, in addition to other requirements.

2.4.1. WSDOT needs to ensure that it is on schedule to annually inspect permanent stormwater BMPs by the specified compliance date.

Section 7.2.4 of the WSDOT SWMPP requires the following: “Within 36 months from the effective date of this Permit [March 6, 2012], WSDOT will annually inspect permanent stormwater BMPs in Phase I and II areas using *Highway Runoff Manual* maintenance standards.... Compliance with the annual inspection requirements must be determined by the presence of an established inspection program designed to inspect all sites, and achieving inspection of 95% of all sites.”

Pursuant to this requirement, the EPA Inspection Team requested “[r]ecords of post-construction BMP maintenance inspections (most recent Reporting Year).” The WSDOT Response Inventory, Part 2 Submittal (see [Appendix C, Exhibit 2](#)), states: “WSDOT does not have records of inspection and maintenance of stormwater treatment and flow control BMPs. Permit requirements for stormwater treatment and flow control BMPs inspection and maintenance does not come into effect until March 2012. *To date inspections and maintenance performed at these structures have not been documented* [emphasis added]. WSDOT is finalizing our process to document inspection and maintenance of these structures in our Highway Activity Tracking System (HATS).”

During a site visit to the Narrows Bridge Maintenance Facility, the EPA Inspection Team identified the need to document inspection and maintenance activities for two WSDOT stormwater ponds at the facility (see [Appendix D, Photograph 6](#)). The Team reminds WSDOT that it is critical to maintain documentation in a manner that clearly demonstrates compliance with Permit requirements.

2.4.2. Concerns pertaining to improper pollution prevention and housekeeping practices were noted during site visits at WSDOT Maintenance facilities and material storage sites conducted as a component of the inspection.

On January 31, 2012 and February 1, 2012 the EPA Inspection Team conducted site visits at multiple WSDOT-owned and/or operated facilities. The purposes of the site visits were to document site conditions and to assess WSDOT’s oversight activities for highway facility operation and maintenance. The EPA Inspection Team visited the Lakeview Area Maintenance Facility, the Tacoma Gulch vacuum truck decant and stockpile site, and the Tacoma Narrows Bridge facility in the Olympic Region and the Kent Maintenance Facility and the Starr Lake stockpile site in the Northwest Region.

Because of their relevance to WSDOT’s obligations under its MS4 permit, summary observations pertaining to the site visits to the Lakeview Area and Kent Maintenance

Facilities and to the Tacoma Gulch vacuum truck decant and stockpile site are presented below. Specifically, the EPA Inspection Team identified site concerns pertaining to improper pollution prevention and housekeeping practices at those sites. It should be noted that the Lakeview Area and Kent Maintenance Facilities both have SWPPPs as required under the Permit; Tacoma Gulch is not specified as one of the facilities that is required to have a SWPPP under the Permit.

At the Lakeview Area and Kent Maintenance Facilities, roadway salt was stored in covered sheds, but the EPA Inspection Team observed stormwater run-on entering the salt sheds. At the Lakeview Area Maintenance Facility, curtains were installed to prevent stormwater from coming into contact with the salt. However, stormwater had sheet-flowed across the pavement and underneath the concrete barriers into the salt storage shed (see [Appendix D, Photographs 7 and 8](#)). Appendix B of the Lakeview Area Maintenance Facility SWPPP identifies pollution-generating sources and states that “solid chemical should be stored on an impervious surface that is sloped so that stormwater does not come into contact with the solid chemical” (see [Appendix C, Exhibit 12](#)). Although the SWPPP indicates that the pavement where the salt shed is located slopes toward the on-site infiltration pond, stormwater entering into the shed underneath the concrete barriers was coming into contact with the salt. Similarly, at the Kent Maintenance Facility the pavement sloped toward the salt shed, causing water to come into contact with the salt and salt/sand stockpiles and pond in the low area inside the covered shed (see [Appendix D, Photograph 9](#)).

The EPA Inspection Team made additional observations in the truck/equipment parking area during the site visit to the Kent Maintenance Facility. A visible sheen was present next to a piece of heavy equipment, and various trucks and equipment were parked up-gradient in the contributing drainage area that leads toward a gravel strip at the edge of the pavement (see [Appendix D, Photographs 10 and 11](#)). Additional spill prevention and cleanup BMPs might be needed to prevent oil and grease from mixing with stormwater.

Another instance of stormwater run-on to a material storage area was observed during the site visit to Tacoma Gulch. The Tacoma Gulch site is used for vector decant, aggregate stockpiling, and temporary storage for street sweepings. Light rain was occurring during the site visit. Street sweepings were stockpiled underneath an overpass and within walls constructed of concrete barriers (see [Appendix D, Photograph 12](#)). The pavement sloped toward the stockpile area, and standing water had accumulated in direct contact with the street sweepings stockpile. Water was observed seeping underneath the concrete barriers and sheet-flowing down the pavement. In an effort to capture the stormwater seeping underneath the concrete barriers, WSDOT had constructed a curb across the pavement to divert water to an excavated area, where stormwater could pond and eventually infiltrate into the ground (see [Appendix D, Photographs 13 and 14](#)). WSDOT staff explained that the curb and infiltration area was a temporary BMP until a permanent solution could be constructed. During the Tacoma Gulch site visit, the EPA Inspection Team also observed rill erosion in an open area on-site and water flowing off-site (see [Appendix D, Photographs 15 and 16](#)). Due to the nature of the activities occurring at Tacoma Gulch,

WSDOT should consider additional drainage and site stabilization BMPs to prevent potential pollutants from migrating off-site in stormwater.